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Notice of Allowability

Application No.

09/852,436

Examiner

Chirag G. Shah

Applicant(s)

AGRAWAL ET AL.

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/11/07.
2. ☒ The allowed claim(s) is/are 1-41.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.


CHIRAG G. SHAH
PRIMARY PATENT EXAMINER

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with George C. Pappas on 2/13/07.

The application has been amended as follows:

10. (Currently amended) In a finger front end, a method of performing chip rate processing for a plurality of channels, comprising:

receiving samples as inputs to a shift register sized to hold a quantity of samples sufficient for a round;

accessing a plurality of samples spaced chip widths apart simultaneously from the shift register in accordance with an index address, the index address corresponding to samples associated with a channel;

performing a parallel sum calculation on the plurality of samples to produce a result, the accessing and parallel sum calculation being performed once per round for each of a plurality of channels; ~~and~~

accumulating at least one result into a symbol, the symbol corresponding to a number of samples equal to a spreading factor; and

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a scheduler for controlling the shift register, the parallel sum calculator, and the accumulator such that they are time-shared to produce symbols for each of the plurality of channels.

2. The following changes to the drawings have been approved by the examiner and agreed upon by applicant:

Figures 2-5 are not clearly legible, please provide formal drawings. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

Reasons For Allowance

3. The following is an examiner's statement of reasons for allowance:

Regarding claims 1-16 and 30-41, Prior Art fails to disclose of the processing a plurality of channel comprising an accumulator for accumulating at least one result into a symbol, the symbol corresponding to a number of samples equal to a spreading factor and a scheduler for controlling the shift register, the parallel sum calculator, and the accumulator such that they are time-shared to produce symbols for each of the plurality of channels in combination with other limitations set forth in the respective claims.

Regarding claims 17-26, Prior Art fail to disclose of a parallel sum calculator for receiving the plurality of I and Q samples according to the index address and producing an I and Q result and a scheduler for generating control of the shift register and the parallel sum calculator such that they are time-shared to produce results in sequence for each of the plurality of channels, wherein the control comprises: an active channel value for indicating which of the

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plurality of channels corresponds to the output of the parallel sum calculator; and an index address for accessing the shift register in accordance with the active channel in combination with other limitations set forth in the respective claims.

Regarding claims 27-29, a method for producing an index associated with each channel, for accessing a parallel access shift register, comprising: in each round of CYCLES_PER_ROUND: remain idle for one cycle, refrain from accessing the shift register or ignore the results of such access; and sequence through each channel, one channel per cycle, adjusting each channel's associated index, wherein the index adjustment comprises the following steps: when the index associated with a channel is less than zero: increment the index by CYCLES_PER_ROUND; refrain from accessing the shift register or ignore the results of such access in combination with other limitations set forth in the respective claims.;

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G. Shah whose telephone number is 571-272-3144. The examiner can normally be reached on M-F 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7682. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cgs

February 13, 2007



CHIRAG G. SHAH
PRIMARY PATENT EXAMINER